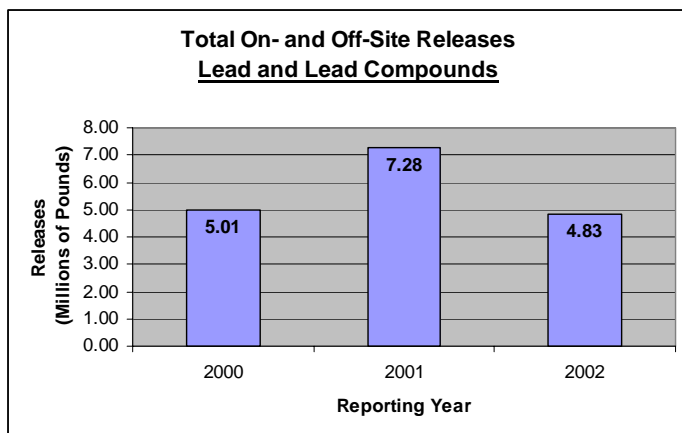
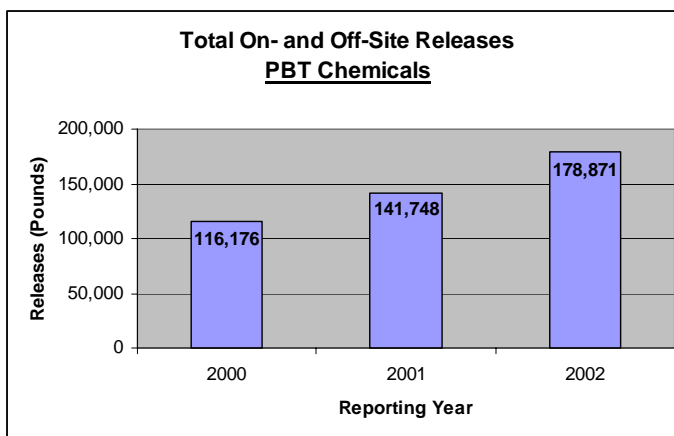
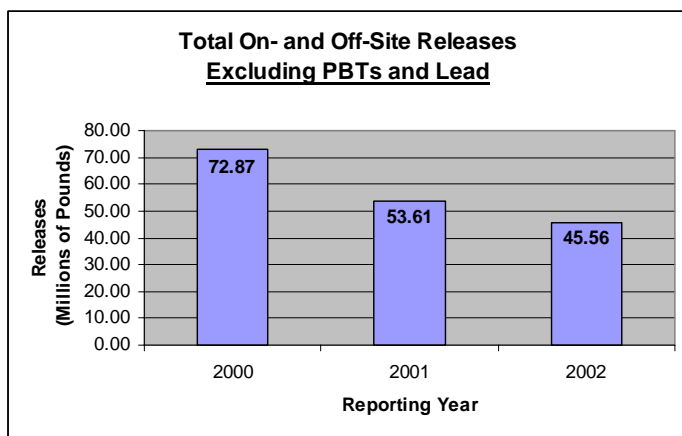




California Report: 2002 Toxics Release Inventory

U.S. EPA Region 9
Arizona, California,
Hawaii, Nevada, the
Pacific Islands, and
Tribal Nations

Toxic Chemical Releases: 2000 - 2002



Total Releases for Reporting Years 2000 – 2002					
Year	Air	Water	On-Site Land	Under-ground Injection	Off-Site
2000	23,695,460	6,083,769	34,344,148	50,012	13,825,843
2001	20,074,289	5,229,333	28,080,478	71,733	7,573,971
2002	19,435,065	5,860,099	19,380,326	37,228	5,852,080

The 2002 Public Data Release

EPA has just made public the 2002 data on toxic chemicals that were released to California's air, water and land. This information comes from the Toxics Release Inventory (TRI), a federal community right-to-know program. In California, 1534 facilities reported a total of 50.6 million pounds of toxic chemical releases*.

It is important to note that release should not be directly equated with risk. To evaluate risk, release data must be combined with information about chemical toxicity, site-specific conditions, and exposure. In addition, these data do not indicate whether a facility is violating environmental laws. Many of the substances reported through this program are subject to state and federal regulations designed to protect human health and the environment.

* Release is defined as the amount of a toxic chemical released on-site (to air, water, underground injection, landfills and other land disposal), and the amount transferred off-site for disposal. Year to year data comparisons do not reflect changes in reporting requirements.

Industries

A facility is subject to TRI reporting requirements if it: has 10 or more full-time employees; is classified under a reportable Standard Industrial Classification (SIC) code; and manufactures, processes, or otherwise uses any of the listed toxic chemicals in amounts greater than the threshold quantities. For most chemicals (excluding PBTs) the thresholds are 25,000 pounds for manufactured or processed, and 10,000 pounds for otherwise used.

Manufacturing industries have been reporting their releases since 1987, and federal facilities started reporting in 1994. In 1998, an additional seven industry sectors began reporting their toxic chemical releases for the first time. These sectors are metal and coal mining, electricity generation, commercial hazardous waste treatment, solvent recovery, petroleum bulk terminals, and wholesale chemical distributors.

Releases

California's total reported on- and off-site releases decreased 17% when compared to 2001 data. Leading the trend was a decrease of 8.7 million pounds in reported on-site land disposal, a 31% change. This is due primarily to a decrease in waste from toxic cleanup projects disposed at the Chemical Waste Management Inc. facility in Kettleman City.

Also contributing to the state trend was a reported decrease in transfers off-site for disposal, down 23% from the previous year. This was due in large part to decreased waste handling at DK Environmental in Los Angeles and Osmonics Desal in Vista.

Reported releases to air decreased slightly by 3%, while water releases increased by 12%, from 2001 levels. Much of the increase in releases to water was due to increased discharges at Samoa Pacific Cellulose, L.L.C. in Humboldt County and at Shell Oil Products, Martinez Refinery.

Reported underground injection releases reported have decreased by 48%. Much of this decrease is attributable to three refineries in Bakersfield (Shell Bakersfield Refinery on Rosedale Highway, San

Joaquin Refining Co. Inc., and Shell Bakersfield Refinery on Gibson Street).

Persistent, Bioaccumulative, and Toxic Chemicals

In the year 2000, TRI was expanded to include additional persistent, bioaccumulative and toxic (PBT) chemicals, and to require reporting for these chemicals at lower thresholds, ranging from 0.1 grams to 100 pounds. PBT pollutants are toxic chemicals that persist in the environment and bioaccumulate in food chains, thus posing risks to human health and ecosystems.

In California, 5.0 million pounds of total on-and off-site releases of PBT chemicals were reported. Below is a table of the PBT release in California ranked by total on- and off-site releases. The data is in pounds for all chemicals except dioxin, which is given in grams.

Table of PBT Chemical Releases in California

Chemical	Total On- and Off-Site Releases		Percent Change
	2001	2002	
Lead	6,215,043.43	4,597,352.41	-26
Lead Compounds	1,062,551.53	227,955.36	-79
Polychlorinated Biphenyls (PCBs)	16,743.11	90,773.08	442
Mercury Compounds	44,137.28	59,746.99	35
Polycyclic Aromatic Compounds (PACs)	34,066.45	19,423.44	-43
Trifluralin	2184	4,299.70	97
Mercury	30,821.87	2,047.49	-93
Benzo (g,h,i) Perylene	2,615.10	1,080.69	-59
Chlorodane	2,005.70	672.2	-66
Toxaphene	597	468.9	-21
Tetrabromobisphenol A	7,795.00	122	-98
Hexachlorobenzene	460.76	91.6	-80
Heptachlor	60	23.1	-62
Dioxin and Dioxin-like Compounds (in grams)	128.21	122.68	-4

* Releases of persistent, bioaccumulative and toxic (PBT) chemicals in pounds. Dioxin and dioxin-like compounds data are not in Toxicity Equivalence (TEQ).

Lead and Lead Compounds

Starting in the year 2001, lead and lead compounds were reported as persistent, bioaccumulative and toxic (PBT) chemicals. While lead and lead compounds have been on the list of reportable chemicals since 1987, for the year 2001 the reporting threshold was drastically lowered (from 25,000 pounds manufactured or processed, and 10,000 pounds otherwise used to 100 pounds manufactured, processed or otherwise used). As a result, additional facilities are required to report releases of lead and lead compounds.

Nearly 4.8 million pounds of total on- and off-site releases of lead and lead compounds were reported in California. The industry categories releasing the largest amounts of lead and lead compounds were the Refuse Systems industry and the Primary Metal Industries. Much of the lead reported was released to land (approximately 2.8 million pounds) in a permitted hazardous waste landfill by Chemical Waste Management Inc., in Kettleman City.

Mercury and Mercury Compounds

Much of the mercury and mercury compound releases reported were released to land (nearly 56,000 pounds) by the Metal Mining industry. The largest share of air emissions, approximately 3,600 pounds, came from the hydraulic cement industry. Petroleum refineries reported over 450 pounds of mercury and mercury compounds released to the air.

Polychlorinated biphenyls (PCBs) and Polycyclic Aromatic Compounds (PACs)

Most of the reported PCBs were disposed on-site in a permitted hazardous waste landfill by Chemical Waste Management Inc. in Kettleman City (approximately 90,000 pounds). Hazardous waste treatment facilities reported releasing the most PACs, over 17,000 pounds.

Dioxin

For dioxin and dioxin-like compounds, much of the reported releases are attributable to hazardous waste treatment facilities, releasing over 85 grams to land. These land releases are considered on-site disposal in permitted hazardous waste landfills.

Top Facilities for Releases

The top 10 facilities for total on- and off-site releases, of all chemicals, in California are:

- ❶ Chemical Waste Management (Kettleman City, Kings County) with 11.6 million pounds.
- ❷ Clean Harbors Buttonwillow, L.L.C. (Buttonwillow, Kern County) with 2.6 million pounds.
- ❸ McLaughlin Mine (Lower Lake, Lake County) with 2.4 million pounds.
- ❹ Samoa Pacific Cellulose L.L.C. (Samoa, Humboldt County) with 2.2 million pounds.
- ❺ Hilmar Cheese Co. Inc. (Hilmar, Merced County) with 2.2 million pounds.
- ❻ Quemetco Inc. (City of Industry, Los Angeles County) with 1.9 million pounds.
- ❼ ExxonMobil Oil Corp. (Torrance, Los Angeles County) with 1.7 million pounds.
- ❽ Chevron USA Inc. Chevron Prods. Co. Div. (El Segundo, Los Angeles County) with 1.7 million pounds.
- ❾ Valero Refining Co. California Benicia Refy. (Benicia, Solano County) with 1.1 million pounds.
- ❿ Shell Oil Prods. U.S. Martinez Refy. (Martinez, Contra Costa County) with 1.1 million pounds.

The top 10 facilities for total on- and off-site releases, of PBT chemicals, in California are:

- ❶ Chemical Waste Management (Kettleman City, Kings County) with 114 thousand pounds.
- ❷ McLaughlin Mine (Lower Lake, Lake County) with 49 thousand pounds.
- ❸ Clean Harbors Buttonwillow, L.L.C. (Buttonwillow, Kern County) with 3,207 pounds.
- ❹ Lesco Inc. Stockton Plant (Stockton, San Joaquin County) with 2,781 pounds.
- ❺ Lehigh Southwest Cement Co. (Tehachapi, Kern County) with 2,346 pounds.
- ❻ Clean Harbors Los Angeles L.L.C. with 912 pounds.

- ⑦ ExxonMobil Oil Corp. Torrance Refy. (Torrance, Los Angeles County) with 686 pounds.
- ⑧ Toro Agricultural Irrigation (Madera, Madera County) with 583 pounds.
- ⑨ BP West Coast Prods. L.L.C. Carson (Carson, Los Angeles County) with 560 pounds.
- ⑩ Hanson Permanente Cement (Cupertino, Santa Clara County) with 452 pounds.

The top 10 facilities for total on- and off-site releases, of lead and lead compounds, in California are:

- ① Chemical Waste Management (Kettleman City, Kings County) with 2.8 million pounds.
- ② Quemetco Inc. (City of Industry, Los Angeles County) with 1.2 million pounds.
- ③ Clean Harbors Buttonwillow, L.L.C. (Buttonwillow, Kern County) with 117 thousand pounds.
- ④ U.S. Marine Corps MCB Camp Pendleton (Camp Pendleton, San Diego County) with 112 thousand pounds.
- ⑤ McLaughlin Mine (Lower Lake, Lake County) with 76 thousand pounds.
- ⑥ U.S. Marine Corps Natural Resources & Environmental Affairs (Twentynine Palms, San Bernardino County) with 69 thousand pounds.
- ⑦ TXI Riverside Cement Oro Grande Plant (Oro Grande, San Bernardino County) with 60 thousand pounds.
- ⑧ Keysor-Century Corp. (Saugus, Los Angeles County) with 52 thousand pounds.
- ⑨ Clean Harbors Los Angeles L.L.C. 34 thousand pounds.
- ⑩ Molycorp Inc. Mountain Pass Mine (Mountain Pass, San Bernardino County) with 33 thousand pounds.

On-line Access

For national information on data releases, see:

<http://www.epa.gov/tri>

The TRI data is available through Envirofacts Warehouse, EPA's premier internet site for distributing environmental information at:

<http://www.epa.gov/enviro>

or the TRI Explorer tool:

<http://www.epa.gov/triexplorer>

For general information on the Toxics Release Inventory, including reporting requirements for businesses, go to:

<http://www.epa.gov/region09/toxic/tri>

For additional information on dioxin, go to:

<http://www.epa.gov/ncea/dioxin.htm>

For more information on the EPA's PBT Chemicals Program, go to:

<http://www.epa.gov/opptintr/pbt/>

Information and Assistance

We are happy to answer your questions and assist you in learning more about the TRI Program in Region 9.

U.S. EPA Region 9
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